I claim:

1. A method for manufacturing an air boost device, said method comprising:

introducing a sacrificial material into a die comprised of a plurality of rigid die inserts (20) to form a compressor wheel pattern comprising a hub (1) defining an axis of rotation and backswept aerodynamic blades (4, 5) carried on said hub,

extracting said die inserts (20) radially or along a curve to expose said compressor wheel pattern,

forming a mold by a lost wax process around said compressor wheel pattern (21),

forming a titanium compressor wheel by investment casting in said mold, and

mounting said titanium compressor wheel within a compressor housing.

2. A method as in claim 1, wherein said compressor wheel is a centrifugal compressor wheel adapted for drawing air in axially, accelerating said air centrifugally, and discharging air radially.

3. A method as in claim 1, wherein said compressor housing includes a volute-shaped chamber adapted for receiving air discharged from said compressor wheel.

4. A method as in claim 1, wherein said die insert retraction is by an automated process.

5. A method as in claim 1, wherein said die retraction is by a hydraulic, pneumatic, or electric process.

6. A method as in claim 1, wherein said die comprises one die insert (20, 20') to define each of said air passages between adjacent blades.

7. A method as in claim 1, wherein said die comprises two die inserts (20, 20') to define each of said air passages between adjacent blades.

8. A method as in claim 1, wherein said die comprises three die inserts (20, 20') to define each of said air passages between adjacent blades.

9. A method as in claim 1, wherein said aerodynamic blades comprise alternating full blades (4) and splitter blades (5).

10. A method for manufacturing a turbocharger, comprising:

designing a compressor wheel pattern shape with an annular hub (1) and a plurality of backswept blades (4, 5), each blade including a leading edge (18), an outer edge adapted for close passage to a turbocharger compressor housing, and a trailing edge (16), wherein said blades (4, 5) define air passages between adjacent blades and are contoured such that each of said air passages between adjacent blades can be defined by not more than three die inserts (20) inserted between adjacent blades and respectively retractable along a radial or curved path by an automated process,

forming a pattern of said compressor wheel by introducing a sacrificial material into a die comprised of a plurality of rigid die inserts (20),

extracting said rigid die inserts (20) radially or along a curve to expose said compressor wheel pattern,

forming a mold by a lost wax process around said compressor wheel pattern (21),

forming a titanium compressor wheel by investment casting in said mold, and

mounting said compressor wheel within said turbocharger compressor housing.

11. A method as in claim 10, wherein said blades comprise full blades and splitter blades.

12. A method as in claim 10, wherein said titanium compressor wheel is formed of a titanium alloy.

13. A method as in claim 12, wherein said titanium alloy comprises 85-95% titanium, 2-8% aluminum, and 2-6% vanadium.

14. A method as in claim 12, wherein said titanium alloy comprises approximately 90% titanium, 6% aluminum, and 4% vanadium.